Strategies for Improving Clinical Care of Older Adults in the Emergency Department

Audrey-Anne Brousseau, MD[a,*], Rebecca Schonnop, MD[b], Don Melady, MD[c,d]

KEYWORDS

• Older adults • Emergency department • Care • Geriatric

KEY POINTS

- Older ED patients have medical, social and functional complexities that require a multifaceted approach. This complexity can be addressed by enhancing collateral history, incorporating family and caregivers, and ensuring an interdisciplinary assessment.
- ED clinicians need an understanding of the common geriatric syndromes, the reality of polypharmacy, the value of goals of care, and the importance of a thorough physical exam including an assessment of function.
- To ensure quality of care for older patients and to minimize adverse outcomes, every ED should have access to basic equipment to support physical and sensory impairments, and an approach to structured transitions of care.

INTRODUCTION

In the past 25 years, the number of older people in emergency departments (EDs) has increased significantly. Due to improvements in public health measures and chronic disease management, life expectancy has increased in almost all countries by as much as 15 years. Many countries saw large increases in the birthrate during the 1950s and 1960s. In North America, members of that largest baby boom in world history were aged 60 to 80 years in 2024. As a result, for most emergency physicians (EPs) practicing today, 25% to 50% of their patients will be over the age of 65 years, yet EPs and the systems in which they work remain poorly prepared to assess and manage older adults.

[a] Département de médecine familiale et médecine d'urgence, Université de Sherbrooke, 580 rue Bowen Sud, Sherbrooke, Québec, J1G 2E8, Canada; [b] Department of Emergency Medicine, University of Alberta, 750 University Terrace 8303 - 112 street, Edmonton, Alberta, T6G 2T4, Canada; [c] Department of Family and Community Medicine, University of Toronto, 500 University Avenue, Toronto, Ontario, M5G 1V7, Canada; [d] Schwartz-Reisman Emergency Medicine Institute, Mount Sinai Hospital, 600 University Avenue, Toronto, Ontario, M5G 1X5, Canada
* Corresponding author. 580 rue Bowen Sud, Sherbrooke, Québec, J1G2E8, Canada
E-mail address: Audrey-anne.turcotte-brousseau@usherbrooke.ca

Emerg Med Clin N Am 43 (2025) 179–187
https://doi.org/10.1016/j.emc.2024.08.002 **emed.theclinics.com**

In their book, *Creating a Geriatric ED*, Melady and Schumacher argue that the changes required to improve care for older adults in any ED fall into 3 categories: people, place, and processes.[1] The other articles in this issue of Clinics provide an update and guidance for managing many of the clinical entities specific to this population. This article provides a set of strategies relating to the people, physical space, and processes that EPs can integrate to improve the clinical care of older adults presenting to their EDs.[2]

Enhance Knowledge of Geriatric Syndromes

Older adults often have complex medical, social, functional, and cognitive issues that are unlike other patient groups. EPs need to understand the impact of cognitive impairment, frailty, falls, elder abuse, polypharmacy, and atypical presentations of disease on care. Geriatric syndromes are medical presentations or disorders that occur as a result of impairments in multiple different systems. It is important for physicians to receive education and training about geriatric syndromes for the successful care of older patients.

- Cognitive impairment: The various forms of dementia may present differently, and, while it is a chronic process, it can lead to acute fluctuations in behavior.
- Delirium: This is an acute, waxing and waning disorder of mental status and attention.
- Frailty: Multi-organ decline in reserve function causes increased vulnerability to chronic or acute stressors. Since frailty is a better predictor than age for many clinical outcomes, EPs need strategies to assess and integrate it in care planning.
- Falls: Fall-related visits are a sentinel event for many older adults.[3] EPs should focus on identifying causes for the fall, injuries from the fall, and safe disposition planning aimed to prevent future falls.
- Elder abuse and neglect: These are under-recognized in health care, and certainly in the ED. EPs need enhanced awareness of the many forms of elder abuse and neglect, screening tools, and management strategies.
- Polypharmacy: While important for managing acute and chronic conditions, the use of multiple medications can lead to adverse events or drug interactions. Clinicians need awareness of polypharmacy as a contributor to symptoms and of strategies for appropriate modification of prescribing for older adults.
- Atypical presentations: Older adults may present with so-called atypical symptoms of common diseases (eg, recurrent falls as the only symptom of pneumonia). Clinicians need to be attuned to seemingly vague presentations–falls, confusion, weakness, acute functional decline–and see them as symptoms of potentially serious disorders that have a broad differential.

Processes will differ between EDs, but the use of validated screening tools for these common geriatric syndromes can enhance detection and standardize care. In **Table 1**, there is a list of examples of validated screening tools that you can implement in your ED. The best tools will be the one selected based on your ED care team choice and needs.

Determine Goals of Care

Understanding the goals of care for older patients in the ED is a vital aspect of delivering high-quality health care. As individuals age, certain investigations and treatments may inadvertently contribute to increased suffering, particularly in frail older adults with multiple comorbidities.[4] Early discussions regarding goals of care have been linked to positive outcomes, including improved quality of life, decreased use of non-beneficial medical interventions, positive family experiences, and reduced overall costs.[5] Although initiating these discussions in the fast-paced ED environment may be

Table 1
Examples of screening tools and resources for geriatric syndromes in the ED

Geriatric Syndrome	Screening Tools or Resources
Cognitive impairment	Mini Cog, Ottawa 3-D, Mini-Mental State Exam (MMSE), 7-min screen
Delirium	Confusion Assessment Method (CAM), 4-AT, Delirium triage screen, brief-CAM (b-CAM)
Frailty	Clinical frailty scale, Edmonton Frail Scale, Frailty Index, Frailty phenotype, FRAIL scale
Falls	Timed Up and Go Test (TUG), Falls Risk Assessment Scale for the Elderly (FRASE), 3 Key Question (3KQ), Short Falls Efficacy (FES-1), FROP-Com
Elder abuse and neglect	Elder Abuse Suspicion Index (EASI), Elder mistreatment Screening and Reporting Tool (EM-SART)
Polypharmacy	Beers criteria, STOPP and START criteria

challenging, many frail older adults appreciate the opportunity to express their preferences for care.

Initiating this conversation can be as simple as asking: "How have things been at home in the last year?" This straightforward question can elicit valuable information about the patient's overall well-being. Another insightful query, especially when dealing with a cognitively impaired patient, is directed toward their family: "When they were healthy, what would your family member have said if they were to see themselves in this condition?" The response often unveils essential insights into the patient's values and priorities in life.

While there are numerous approaches to engage in discussions about goals of care, the key is to integrate one into routine practice. For those EDs with access to it, involvement of a palliative care team can be invaluable in certain circumstances. By incorporating goals of care conversations into routine practice, health care professionals can better align their care with the values and preferences of older patients, ultimately improving the overall quality of health care delivery and experience in emergency settings.

Expand the Scope of the Collateral History

Older adults may have complex care needs due to comorbidities, polypharmacy, social and functional impairments. They often have multiple clinicians and caregivers in their network of care. Due to this, it is helpful to have communication with this network to capture the events that led to the ED presentation and get a better sense of how the patient is doing. Collateral information serves 2 roles for the emergency clinician. First, this information can influence the course of workup and management in the ED by identifying acute geriatric syndromes and medical issues. Second, this information can inform safe disposition planning based on the patient's social, functional, cognitive, and physical status and potential barriers to managing well at home. Collateral information is particularly important for older patients who have cognitive impairment or acute delirium, and who are unable to accurately provide a history. Practically, in the ED, collateral history can be acquired through review of electronic health records, in-person or telephone communication with caregivers, direct phone calls to a care facility, reports from or conversations with the sending physician or primary care physician, and/or review of Emergency Medical Service (EMS) reports.

Include Caregivers as a Member of the Team

Caregivers are important team members for older patients. They can facilitate care in the ED in many ways.[6]

- Collateral information is helpful for older patients and caregivers are a wealth of information and knowledge. Caregivers can answer specific medical questions about the patient and their presentation, can answer screening questions for geriatric syndromes, and can participate in goals-of-care discussions for the patient.
- For patients with behavioral and psychological symptoms of dementia, or for patients at risk of or with acute delirium, caregivers can provide support at the bedside with non-pharmacological strategies. This includes re-orientation for patients with delirium, bringing familiar or comforting objects from home, sharing tips on how to redirect the patient based on lived experience, supplying their home sensory aids, and aiding with basic bedside care[7];
- When preparing for discharge or transitions in care, there should be discharge protocols in place that facilitate communication with the patient's caregiver(s) in addition to their outpatient team, as these caregivers will need to understand the patient's plan and follow-up needs. They will also be able to identify barriers to discharge that can be addressed with the interdisciplinary care team in the ED and thus should be involved early in the care process.[6,7]

In order to help facilitate these caregiver roles in the ED, it is important to welcome them into the ED. There should be a policy to encourage the presence of caregivers in the ED. At minimum there should be a chair in the patient room so the caregiver can sit in comfort at the bedside. When possible, these caregivers should be encouraged to be present in the ED. If they are not available in person, then they should be included virtually.

Assess Medication Use

Older adults commonly experience polypharmacy, the use of 5 or more medications, which is associated with numerous negative consequences.[8] Medication review is a key component of quality care for older patients in the ED. When an older patient presents to the ED with a new symptom, consider how medications could contribute.

- Medications can commonly cause side effects that may mimic other disease processes, such as new lower leg edema after starting amlodipine. Side effects can lead to the *prescribing cascade,* when an adverse drug reaction is misinterpreted as a new medical condition and leads to another drug prescription.[9]
- Medications can cause significant drug-drug interactions leading to other symptoms or complications. For example, a patient on warfarin who is given a course of macrolide antibiotics without warfarin dose changes resulting in subsequent prolongation of warfarin effects leading to gastrointestinal bleeding and anemia.
- Medications can interact with the patient's other comorbid conditions leading to worsening or new symptoms. For example, a patient with underlying chronic kidney disease, started on antibiotics without renal dosing resulting in the patient presenting with generalized weakness and acute renal failure.[10]

Because of the risks of polypharmacy, it is critical to acquire an accurate and complete medication list, including over-the-counter and traditional medicines. This can be done by patient history, review of pharmacy records, and caregiver collateral.

In addition, it is important to know pharmacokinetic and pharmacodynamic changes that occur with aging and how these changes influence medication selection, dosing,

and frequency, as detailed in Table 2. There are resources available to help clinicians, including screening tools (START, STOPP) and Beers Criteria for potentially inappropriate medication use.[11,12] Having access to a pharmacist in your ED or hospital can help with collecting the best possible medication history and in safe prescribing practices. In practice locations where a hospital or ED pharmacist is not available, community-based pharmacists remain a valuable team member in caring for older people.

Perform a Physical Examination including Walk Test and Tests of Function

Conducting a thorough physical examination in older adults presents inherent challenges, particularly given the physiologic changes associated with aging. For instance, the abdominal examination may be less reliable compared to assessments in younger adults. Nevertheless, integrating some additions to your routine can yield substantial information, enhancing both your investigative process and the ultimate disposition of the patient.

A meticulous examination of vital signs is essential. As individuals age, alterations in the respiratory, vascular and cardiac systems may obscure signs of shock, potentially misleading the clinician. Vital signs may be affected by patient's medications such as beta-blockers or calcium channel blockers, for example, affecting their ability to mount a tachycardic response to an insult. Close scrutiny of vital signs through the lens of polypharmacy and the normal physiologic changes of aging is essential.

Table 2
Summary of pharmacokinetic and pharmacodynamic changes with aging

Pharmacokinetic	
Absorption	• Reduced gastric and intestinal motility • Increased gastric pH
Distribution	• Increase volume of distribution for lipophilic drugs and reduced volume of distribution for hydrophilic drugs • Increased permeability of blood brain barrier, resulting in more pronounced CNS effects with select medications • Reduced protein binding capacity, resulting in increased free plasma levels of medications with high protein binding capacity (eg, phenytoin)
Metabolism	• Reduced hepatic metabolism due to decreased hepatic size and blood flow. Results in increased serum concentration of hepatically metabolized medications • Reduced phase 1 metabolism
Excretion	• Reduced renal clearance due to decreased renal blood flow and reduced nephrons. Results in prolonged accumulation of renally excreted medications
Pharmacodynamic	
Central nervous system	• More sensitive with age due to decreased cerebral blood flow, increased permeability of blood brain barrier, reduced response to adrenergic stimulation and reduced neurotransmitters. • Results in more pronounced CNS effects with medications such as sedative hypnotics, opioids, anticholinergics, antipsychotics.
Cardiovascular system	• Alterations due to atherosclerosis, decreased adrenergic response, and reduced cardiac output. • Increased sensitivity to medications such as beta-blockers and calcium channel blockers • Reduced sensitivity to beta-adrenergic receptor agonists and antagonists.

The "Walk Test" is a valuable addition to the physical examination for older adults. This test assesses cognitive status (eg, executive function) and demonstrates the patient's ability to navigate position changes. The cardiac and respiratory system are also challenged as the patient walks. This dynamic evaluation may reveal dyspnea or desaturation events that might not be apparent during rest on a stretcher. Additionally, the "Walk Test" facilitates a more accurate assessment of neurologic, musculoskeletal, and skin status. Performing this test early in the evaluation, rather than during the final pre-discharge visit, increases the clinician's ability to predict and plan for the ultimate disposition more accurately. Whenever possible, the "Walk Test" should be performed by the assessing physician as numerous pieces of information may otherwise be missed if the findings are reported second hand.

For older adults living independently, a functional assessment focusing on their home environment can be helpful. A functional assessment can be done formally by an occupation therapist and/or a physiotherapist. Less formally but more practically, an EP can evaluate function by asking the patient about their activities of daily living (ADL) (bathing, dressing, grooming, etc.) and instrumental ADL (iADL) (financial management, meal preparation, errands, etc.), and whether this changed recently. Bathing is noted by many as the most complex of the ADLs, and if an older adult is able to perform this, it is a positive indicator of basic function. Detecting signs of functional decline through this assessment may prompt further evaluation with community services and home care, ensuring a safe transition of care upon discharge.

Integrate an Interdisciplinary Team into the Emergency Department Assessment

It is a truism that "geriatrics is a team sport." Complexity from multiple acute and chronic medical conditions, as well as social, cognitive and mobility impairment, polypharmacy, and frailty are frequently present in older ED patients. EPs are experts in rapid identification and stabilization of acute conditions. However, they may not have the time given other clinical pressures to assess issues such as functional decline, social isolation, substance use, poor nutrition, medication adherence, frailty, fall risk, or risk for neglect and abuse. ED care will be improved if physicians work collaboratively with interdisciplinary colleagues who can expand the assessment of the older patient beyond what the emergency physician has either the knowledge or the time to complete.

A growing number of EDs have hired full-time geriatric nurse specialists who take responsibility for performing the non-medical assessments and coordinating care for patients. They may conduct additional screens to identify cognitive impairment, risk for falls, social isolation, elder abuse and neglect, etc. as well as ensuring a durable discharge plan, and follow-up after the ED visit, including liaison with long-term care or community-based care. Some of these activities can be filled by a social worker who has additional skills in geriatric care. Accessing a physical therapist and/or an occupational therapist allows for a prompt and complete assessment of mobility and function, maximizing gait aids, making arrangements for home modifications, and determining the best destination for ED discharge—home, sub-acute rehabilitation, long-term care, or admission. Pharmacists can also be key team members, who can assist with medication reconciliations and recommendations.

Costs are often cited as a reason for *not* adding interdisciplinary team members to the ED care team. However, there is increasing evidence that financial savings outweigh the costs of the additional staff. Savings are realized largely through decreasing unnecessary hospital admissions and avoidable ED re-visits.[13]

Ensure Basic Equipment is Available

Older adults will often have physical and sensory impairment that can affect their stay in the ED. It is important to have some specialized equipment that will aid the older patient. Delirium prevention is multifactorial, including mobilization, sensory stimulation, and cognitive stimulation. For mobilization, it is imperative to have several walking aids in the ED so that all mobility-impaired patients can have one at their bedside to promote greater autonomy and mobility. Other essential components are comfortable chairs at the bedside. For example, if all mobile or semi-mobile older adults in the ED have a walker, a comfortable chair and one of the bed handrails down, they will be able to get up and move safely in the ED.

For sensory stimulation, hearing amplifiers and glasses can improve communication with patients who have impaired hearing and vision but may not have their sensory aids with them in the ED. They can permit a better history, enhance understanding of the plan, and prevent delirium.[14]

Finally, orientation in time is helpful. A clock and a calendar can help to maintain orientation throughout the day. There are several electronic models that display time, day of the week, and date. A suggestion is to have one per room within the line of sight of the patient (not on the wall behind the bed). Cognitively stimulating activities for at-risk or agitated older adults can be achieved with a geriatric activity cart that includes dolls, crosswords, pencils, and other stimulation toys.

All of these examples of specialized equipment are simple and inexpensive, do not require major structural change, and can improve older adults' experience and comfort in the ED.[14]

Coordinate Transitions of Care

An ED visit by an older adult is just 1 step in a continuum of care that may also include primary, specialist, long-term, rehabilitative, home-based, and community-based care. Older adults are at high risk for adverse events during transitions of care.[15] EPs can improve communication at transitions from the ED to minimize adverse outcomes for the patient. For a successful patient outcome and experience, the greatest attention must be paid to "what happened before" and "what happens next" in the movement of complex, possibly frail, older person through that continuum.

An electronic health record can facilitate this transfer of information, but often important participants such as a home-based health care aide or a nurse in long-term, may not be included in that electronic sharing of information. The lack of readily accessible electronic health record is another argument for the importance of interdisciplinary colleagues who can work collectively to ensure successful transitions of care. It is important to send written instructions with the patient and caregiver detailing important information about diagnosis, relevant investigations, follow-up tests or appointments, medication changes, and return to ED instructions. The note and medical workup can also be forwarded to their primary care and specialist team.

SUMMARY

Older patients are a growing sub-population of ED patients worldwide. It is imperative that EDs adapt care to meet their needs. Some changes may be expensive and time-consuming, but other high-impact strategies outlined in this article are inexpensive, and can be implemented as part of routine care. EDs are not just the front door of the hospital anymore. EDs must be an environment where clinicians have the right knowledge and tools to assess and care for older patients appropriately, holistically, and safely.

CLINICS CARE POINTS

- Enhance knowledge about geriatric syndromes.
- Determine goals of care early in the course of the ED visit.
- Expand the scope of the collateral history.
- Include caregivers and family members in the ED as part of the care team.
- Assess medication history and use.
- Perform a physical examination including walk test and tests of function.
- Integrate an interdisciplinary team into the ED assessment.
- Ensure basic and adapted equipment is available.
- Coordinate transitions of care and a strong safety net.

DISCLOSURE

Authors have nothing to disclose and not received any funding.

REFERENCES

1. Melady D, John S. Creating a geriatric emergency department: a practical guide. New York: Cambridge University Press; 2022.
2. Melady D, Schumacher JG. Developing a geriatric emergency department: people, processes, and place. Clin Geriatr Med 2023;39(4):647–58.
3. Carpenter CR, Cameron A, Ganz DA, et al. Older adult falls in emergency medicine-A sentinel event. Clin Geriatr Med 2018;34(3):355–67.
4. Comer A, Fettig L, Torke AM. Identifying goals of care. Med Clin North Am 2020; 104(5):767–75.
5. Bernacki RE, Block SD, American College of Physicians High Value Care Task. Communication about serious illness care goals: a review and synthesis of best practices. JAMA Intern Med 2014;174(12):1994–2003.
6. Ellis B, Brousseau AA, Eagles D, et al. Canadian Association of Emergency Physicians position statement on care of older people in Canadian Emergency Departments: executive summary. CJEM 2022;24(4):376–81.
7. Carpenter CR, Bromley M, Caterino JM, et al. Optimal older adult emergency care: introducing multidisciplinary geriatric emergency department guidelines from the American college of emergency physicians, American geriatrics society, emergency nurses association, and society for academic emergency medicine. Acad Emerg Med 2014;21(7):806–9.
8. Cooper JA, Cadogan CA, Patterson SM, et al. Interventions to improve the appropriate use of polypharmacy in older people: a Cochrane systematic review. BMJ Open 2015;5(12):e009235.
9. Blanda MP. Pharmacologic issues in geriatric emergency medicine. Emerg Med Clin North Am 2006;24(2):449–65, viii.
10. Melady D, Perry A. Ten best practices for the older patient in the emergency department. Clin Geriatr Med 2018;34(3):313–26.
11. O'Mahony D, O'Sullivan D, Byrne S, et al. STOPP/START criteria for potentially inappropriate prescribing in older people: version 2. Age Ageing 2015;44(2): 213–8.

12. By the American Geriatrics Society Beers Criteria Update Expert Panel. American Geriatrics Society 2023 updated AGS Beers Criteria(R) for potentially inappropriate medication use in older adults. J Am Geriatr Soc 2023;71(7):2052–81.
13. Hwang U, Dresden SM, Vargas-Torres C, et al. Association of a geriatric emergency department innovation program with cost outcomes among medicare beneficiaries. JAMA Netw Open 2021;4(3):e2037334.
14. Abraha I, Trotta F, Rimland JM, et al. Efficacy of non-pharmacological interventions to prevent and treat delirium in older patients: a systematic overview. The SENATOR project ONTOP series. PLoS One 2015;10(6):e0123090.
15. Bambach K, Southerland LT. Applying geriatric principles to transitions of care in the emergency department. Emerg Med Clin North Am 2021;39(2):429–42.